the affected side is raised to several tenths of a degree above that of the sound side.

(*e*) Absence of the hard cord along the affected vessel.

(*f*) A cure is the common termination of this affection.

12. The acute arteritis consecutive to typhoid fever may be confounded with muscular pains, local myositis, or neuralgia, when the hard cord is not present. When it is present, the affection might be taken for a phlegmasia alba dolens or a lymphangitis. The differential diagnosis may be established by noting the symptoms as enumerated.

13. When it is demonstrated that these morbid phenomena have their seat in the artery, that is obliterated by a blood thrombus, the question to consider is whether the arterial inflammation is primitive or developed secondarily about an embolic clot detached from the heart. The presence of a bellows murmur, the weakness, the irregularity, the subdued tone of the sounds of the heart; the acuteness of the pain, its sudden recurrence with the symptoms of obliteration, and finally, the appearance of vascular disturbances in several regions remote from each other, would be in favor of embolism. The normal character of the cardiac sounds and rhythm, the slighter degree of pain, less abrupt but perfectly localized, and the tardy appearance of the ultimate sphacelus, would indicate the primitive arteritis.

14. As to its pathogenesis, typhoid arteritis proceeds from two principal factors—local and permanent irritation from infectious parasitic germs, and from profound disturbances of vaso-motor innervation.

## MATERIA MEDICA AND THERAPEUTICS.

INVESTIGATIONS ON INTRA-OCULAR PRESSURE.—Dr. Ernst Gruser has published (*Arch. F. exp. Path. u Pharm.*) the results of some manometric investigations on the intra-ocular pressure, and the effect that atropine and eserine have upon it. By the aid of a specially-contrived apparatus, the author has arrived at the following conclusions: 1. By means of his manometer he is not only able to determine the amount of intra-ocular pressure, or tension, but he can also detect and estimate with accuracy any variations of that pressure. 2. The amount of the intra-ocular pressure depends directly on the height of the vascular pressure. Narcotism similarly alters both, compression of the aorta raises the intra-ocular pressure by from 4 to 5 mm. Hg. Compression of the carotid on the same side causes a rapid fall of 5 or 6 mm. Hg., which, however, gradually rises again to the normal pressure. Tying both jugular veins raises the pressure, but only temporarily. The rapid fall of the arterial blood-pressure which takes place at death is accompanied by a rapid fall in the intra-ocular pressure. 3. In a cat during life, the intra-ocular pressure is on the average equal to 28 mm. Hg.; when dead the pressure is always from 8 to 10 mm. Hg. 4. The movements of the muscles of the iris always affect the intra-ocular pressure, dilatation of the pupil always causing it to rise, and contractions to fall. Section of the sympathetic causes a fall of from 2 to 6 mm. Hg. in the intra-ocular pressure, as well as narrowing of the pupil; irritation of the same nerves causes a rise of the pressure of from 5 to 6 mm., with dilatation of the pupil. 5. Atropine applied to the conjunctiva in quantities sufficient to cause mydriasis raises the pressure (there is sometimes a transitory fall before the rise). 6. Eserine similarly applied causes the pressure at first to rise, but in all cases in less than an hour the pressure had fallen below the normal.—(*Cantrelblat F. Klinischt Medicin. Medical News.*)

ON THE USE OF RESORCINE.—*La France Médicale* publishes a brief of the latest researches in the use of this drug, as given in the *Rivista Internazionale di Medicina e Chirurgia.* M. Rhigi bases his views on 100 observations. He groups resorcine with the aromatics, as among the best antiseptics and most powerful antipyretics. In 62 cases of intermittent fever he found the drug to act promptly, to be well tolerated, and to be readily absorbed. In one case there were symptoms of intoxication, due to imprudence on the part of the patient, who took 4 grammes at a single dose. In another there was a sense of heaviness with pain in the stomach, and in still another a general pruritus, but these symptoms were only of short duration. For this affection he used 4 to 5 grammes daily in an aqueous solution of 100 to 150 grammes. As to its use in this and other affections, he comes to the following conclusions:

1. Resorcine is well tolerated. It produces, but only for a short time, vertigo and tinnitus aurium, congestion of the face, and, very rarely, a sense of weight or pain in the stomach; nearly always there is abundant perspiration for about an hour.

2. Employed externally it is not caustic, and does not give off any disagreeable odor.

3. In miasmatic affections, it is a sure means of combatting the febrile temperature and of opposing the malarial infection.

4. It has a certain influence in reducing the recent tumefactions of the spleen, but does not act on chronic tumefactions.

5. In typhoid fever, pneumonia and erysipelas it has a prompt antifebrile effect, but has no influence on the elevation of temperature.

6. In acute gastro-intestinal catarrh, it is of an undoubted usefulness, and has a rapid and positive effect; it may be combined with bicarbonate of soda.

7. In acute blenorrhagic urethritis, it should be preferred as a local application to other means that are more irritating and less prompt in restoring the mucous epithelium.

8. In acute and positive conjunctivitis and in lesions of the cornea it is one of the best collyriums.

M. Masini uses it in solution in affections of the ear, as a detersive, a slight astringent, an antiseptic, and a caustic, preferable to phenic acid, as the latter is irritating, cauterizing and debilitating to the organism, and has a disagreeable odor; preferable to iodoform with its disgusting odor, and to boracic acid, which has much less antiseptic and antiputrescent qualities. For an antiseptic solution he used 1 or 2 per cent. of resorcine ; in granular otitis, for a marked astringent effect, 4 per cent. ; for a strong caustic solution, 50 or 60 per cent. ; in otorrhœa, for injections, an aqueous solution of 2, 3, 5 per cent. ; in parasitic affections, a vaseline ointment of 10 per cent.

M. Massei recommends warmly the use of resorcine in ozœna, in powder or as a nasal douche. He employs 2 grammes in 600 grammes of water. If this does not relieve he uses the powder, and if a radical cure is not effected, great relief to the odor is afforded.

Bromide of Arsenic in Diabetes.—The *Journal de Médicine et de Pharmacie de l'Algeri* tells us that this drug has been employed four times successfully by Dr. Arpad Bokai. He prepares as follows:

Mix the following in a glass tube:

Arsenious acid }
Carbonate of potassa } .......aa O gr. 1.
Distilled water.................. 5 drops.

Heat to limpidity and add enough distilled water to make 10 grammes. Add four drops of bromine and let the mixture stand for a day, when it is ready for use.

A diabetic, 22 years of age, who, at the time of his admission to the clinic, could hardly mount the staircase, was entirely relieved in a little less than three months. In that interval he gained in weight 8 k., 100 gr., and the proportion of glucose, which had varied between 170 and 111 grammes a day, was reduced to 0. During the last days the medicine was suspended and the patient nourished with rice.

The patient was submitted at first to a strict diet for 17 days, which diminished the proportion of sugar to about one-half. He then received the bromide for 11 days in three-drop doses, which was increased to 6 drops a day, in consequence of which the proportion of sugar diminished rapidly, and the analysis gave only traces. After introducing certain modifications to the diet, a small quantity of sugar was noted in consequence for 27 days. Five drops of the bromide was given, and 150 grs. of rice added to the diet list. Finally the drug was abandoned, the diet restrictions removed, and the patient discharged relieved.

Investigations into the Physiological and Therapeutic Properties of Trinitrine.—M. Marieux has studied the effects of this drug, (Bull. et Memoires de la Soc. de Therapeutique) in 23 experiments made on guinea-pigs, frogs, rabbits and dogs, and on man. These experiments were made in the presence of M. Dujardin-Beaumetz, and with the assistance of MM. Eloy and Huchard, with the following conclusions:

1. Trinitrine acts on the brain by producing phenomena of congestion.
2. It accelerates the heart beat, dilates the peripheral vessels, and diminishes arterial tension.
3. This vascular dilatation seems to depend upon a paralysis of the great sympathetic.
4. It acts but feebly upon the respiration, which becomes irregular.
5. It has but little effect upon the secretions.

In toxic doses:—

1. It produces, in the lower animals, clonic and toxic convulsions.
2. With the rabbit and dog, the toxic dose is variable, but is very large in all cases.
3. In man it commences with 10 drop doses of the alcoholic solution.

In the therapeutic application:—

1. It is indicated in all cases where cerebral anæmia might lead to fatal results.
2. It gives good results in rebellious neuralgias of anæmic origin.
3. Its most marked action is in angina pectoris.
4. It is of no use in diseases of the kidneys or lungs.
5. It is contra-indicated in all affections where there exists active or passive cerebral congestion.
6. It can be administered very satisfactorily in 4 to 6 drop doses of the alcoholic solution of 1 to 100, in the 24 hours, either as a potion or in hypodermic injections.
7. When compared with the action of nitrite of amyl, it is less prompt and less sure, but its effects are more enduring. In many cases it would be well to combine the two.

The Physiological and Toxic Action of Ergotine as Illustrated by Case of Poisoning.—Dr. Debréne (*Bull. Génde Thérapentique,*) gives the case of a young woman 25 years of age, ordinarily in good health, but suffering for 8 or 10 years from hæmorrhages coincident with the menstrual flow, She rarely passed three or four months without having one, two or three attacks of hæmoptysis at the second or third day of her courses, the loss of blood being sufficient to produce an anæmic condition which prostrated her for some time. Examination of the chest showed no affection of the lungs. To relieve this condition Boryjean's ergotine was used with benefit, but on one occasion she took of her own accord a dose equal to 5 or 6 grammes of ergotine. This was in the morning (Nov. 6.); it checked the hæmoptysis, but not the menstrual flow. She took her midday meal with a good appetite; in the afternoon there were a few sharp pains in the abdomen ; at 6 P. M. she took a cup of chocolate; in fact, up to that time there were no evidences of any poisonous effect. At 6:30 P. M. she complained of a severe, dull pain, deep in the lower part of the abdomen, and of a want of air. Soon after she lost consciousness. The symptoms which followed were a marked dryness of the mouth, throat, and skin, pericardial pain which was extreme, with great difficulty in respiration. A deep pectoral and epigastric pain seemed to follow the course of the bronchi and of the œsophagus, and was compared by the patient to rough rasping with a curry-comb. While continuous, the pain was increased at regular short intervals. Vertigo followed; obscurity of vision, ringing in the ears, a sense of weight in the head, and constriction of the temples, formication in the extremities, chilliness and general coldness, insensibility of the integument to the touch, to pain, to cold and warmth. This anæsthesia began with the fingers and toes, to spread over the whole of the body, including the lips, tongue, etc.

At 10 P. M., in addition to theses symptoms, tonic and clonic convulsions set in, resembling epileptiform spasms and followed by contraction of the flexor muscles, the fingers being markedly flexed upon the palms of the hands; extreme pallor, respiration 50, pulse 50, axillary temperature 97.5. A subcutaneous injection af ether into the forearm produced ready relief of all the symptoms, and a gradual progress, with frequent temporary relapses, was made from this time on to recovery, which was established (Nov. 9), in three days. During the treatment 10 grammes of chloral and more than 12 grammes of ether were administered, with a large amount of coffee.

This case brings out in bold relief the physiological action of ergotine. It shows that the absorption of this drug by the stomach is slow and gradual, and may give rise to a false security. It shows that its action is not so fugacious as has been supposed, and that it is not eliminated so rapidly as has been supposed. It indicates the valuable assistance we have in injections of ether in combating the toxic action of the drug.

In spite of the large amount of coffee given, the amount of urine was not increased; it would seem as if the contraction of the minute blood-vessels of the kidneys prevented an abundant filtration. And this action upon the vessels would explain the vertigo, intellectual torpor, and feeling of extreme weakness, that is to say, the diminution of the spinal excito-motor power (anæmia of the brain and cord), the chills, lowering of temperature, dryness of the skin and cessation of the salivary, sudorific and sebaceous secretions, difficulty of respiration (accumulation of asphyxiated blood in the medulla oblongata), and the convulsive attacks (repletion of the veins of the nerve centers and sinuses of the dura mater).

The deep-seated pains in the chest and epigastric region were evidently due to spasms of the muscle fibers of the œsophagus and bronchi, just as the contraction of the skin was due to spasms of the little muscles attached to the hair follicles.

The most curious of these phenomena is the anæsthesia which was complete from the soles of the feet to the scalp, but which did not prevent the patient from appreciating strong, firm pressure, as if the muscular sense was retained.

## OBSTETRICS AND GYNÆCOLOGY.

A FAVORABLE CASE OF RUPTURE OF THE UTERUS. —The *Annales de Gynécologie* give the details of this case in the words of Professor Pajot, and in his happiest style. The case occurred in a multipara. The midwife, after rupturing the membranes, called in a physician, who found the woman suffering from a severe pain in the abdomen, and losing considerable blood; he became demoralized and left the case, when the woman was brought to the clinic. Being anæsthetized, Pajot found a narrowing of the pelvis, a shoulder presentation, the placenta inserted on the inferior segment of the uterus, and a rupture of the vagina and uterus which had its seat in the anterior cul-de-sac, and was prolonged along the anterior wall of the uterus, being sufficient to allow the entire hand to pass through the orifice. The hæmorrhage was excessive. He performed version by external and internal manipulation, and delivered the trunk. The head was well flexed, and the inferior maxilla was easily reached, but it was impossible to disengage the head, on account of the narrowness of the pelvis, which required for its removal a single application of the cephalotribe. On the tenth day, the woman's temperature was 100.4; the pulse 100; she took bouillon and digested well. A diarrhœa which earlier in the case was very obstinate, had about ceased. On the thirtieth day her pulse was 84; temperature 99; well nourished, good color, and out of danger except from possible embolism or hæmorrhage.

OBSERVATIONS ON THE NORMAL TEMPERATURE OF THE HUMAN BODY.—Dr. William Carter, as Physician to the Royal Southern Hospital of Liverpool, has communicated some interesting records of temperature to the *Liverpool Medico-Chirurgical Journal.* After noting the observations so generally made regarding a periodical rise and fall in the temperature of man during the twenty-four hours, a minumum about 6 A. M., and a maximum between 4 and 9 P. M., independent of sleep, he set himself to work to determine whether this periodicity might not be modified in accordance with the ordinary habits of life, and selected for observation the night nurses and night sisters of the Royal Southern Hospital. Their routine is as follows: Rise at a quarter to eight P. M., down at twenty minutes past eight, breakfast at 9, and then enter on their hard duties. Their duties cease at 9 A. M. They take exercise till twelve, when they go to bed. Six of these were selected. They had performed this duty respectively, three years, ten years, seventeen months, two months (2), three weeks and lastly, the night of commencing observation was the first night of the new duty.

The temperature was taken every two hours, with the thermometer in the axilla for five minutes, and continued for five to six days. The record is given in detail, and establishes the conclusions: that a daily depression of temperature takes place in the healthy during night and early morning; that such a change of habit as turns night into day, so far as employment is concerned, does not permanently affect the character of this depression; that a daily range of from two to three degrees Fahr. may take place consistently with health; that an axillary temperature of 96°, or even lower, at some period of the night, is consistent with health, and that the character of the daily oscillation is not markedly affected by food.

*The American Journal of Ophthalmology* is the title of a new journal announced to appear next month, to be published by Jas. Chambers & Co. The editorial management is to be in the hands of Dr. A. Alt.—*St. Louis Courier of Medicine.*